DOCUMENT RESUME

ED 029 585 HE 000 755

By-Witmer, David

The Rise of Administration in Higher Education.

Wisconsin Board of Regents of State Universities, Madison.
Pub Date 69
Note-32p.
EDRS Price MF-$0.25 HC-$1.70
Descriptors-Administrative Personnel, *Educational Quality, Expenditures, *Faculty, *Higher Education, *Student Teacher Ratio, *University Administration

A comparison between the rise of university administration and other institutional growth patterns --such as student enrollment, faculty, and the increasing demand of business and financial affairs --reveals that administration has grown about the same rate as the student body and total faculty. During the first 250 years of higher education in the US, administration depended on the character and attitude of the college president. Today, no standards exist for determining the number of administrative officers necessary for the most efficient operation of a university. Importance should be placed on the effect of various teaching faculty-administrative faculty ratios on the quality of instruction as measured by test scores, persistence to graduate, enrollment in graduate schools, success after graduation, and other factors. A decrease in the teaching faculty, with a constant size student body, will naturally mean larger classes. Although a large segment of the faculty would react negatively to increases in the size of the administrative faculty, several studies of controlled experiments indicated that a decrease in the size of the teaching faculty would not have adverse effects on educational outcomes. Small classes were not shown to have any advantage over large classes. A critical test of leadership would be to shift more effort into administrative functions while minimizing teaching faculty losses. (WM)

ED029585

10

The Rise of Admistration in Higher Education

David R. Witmer

Board of Regents of State Universities
Madison, Wisconsin
1969

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

HE 000 755

The heyday of The Old Time College President[1] is gone forever. Gone with it is the old time faculty. Indeed, the old time faculty, administration, and for that matter the institution itself, were unusually the expressions of different sides of a single personality.[2] "The old time college president was a very real presence. As head disciplinarian . . .his influence was direct and immediate. He lectured and heard recitations. . .His opportunities for shaping opinions and molding character were almost unlimited."[3] His responsibility for the material existence and prosperity of the institution was equally pervasive and complete.[4]

For the first century and a half the president was the faculty in American colleges. "Harvard had been established for more than eighty-five years, Yale for more than fifty, and Princeton for more than twenty years before each had its first professor, and it was to be many years more before regular professors out numbered transient tutors." Instead of being "elected" by the faculty as in Europe, the American college president "elected" his faculty.[5] And he chose his faculty with the welfare and promotion of the institution as the prime criterion.[6]

In 1871 the most noble characterization of a college president was "teacher." When Professor of Rhetoric, John Bascom (later president of the University of Wisconsin), attacked President Mark Hopkins, at a Williams College alumni banquet, for being an inadequate administrator and an indifferent scholar, James A. Garfield (later President of the United States), defended him and Williams College with the memorable epitaph "The ideal college is Mark Hopkins on one end of a log and a student on the other."[7]

In the leading contemporary universities teaching is the function of an "un-faculty" of instructors and graduate students.[8] Faculty are research-oriented "cosmopolitans" predominantly concerned with promoting their peculiar discipline in a way which will bring them honor in the eyes of their colleagues in the national and international professional organization devoted to their particular scholarly discipline.[9] Local interests of the new faculty, where they exist at all, are limited to the preservation and expansion of departmental operations, the sovereignty of the professor in his classroom,[10] and the search for student recruits to the proliferating, mutating, and mitoting academic disciplines.[11]

Contemporary colleges and universities have not only replaced the old-time professor with the academician, that trained specialist who knows the rights and privileges of a profession and who is almost indistinguishable from other organization men, but colleges and universities have acquired a new kind of executive officer in a new "shadowy, powerful entity"[12] called the administration.[13] This administration, peopled by "locals,"[14] is devoted to institutional preservation and expansion, a concern which keeps it strongly involved with and responsive to the trends in secular society.[15] Not limited to the preservation and transmissions of knowledge, the preparation of students for the world of work, the operation of "ideapolis"[16] or a "service station"[17] for society, the new administration maintains a holistic[18] view while using management tools like operations research, systems analysis, and computer-based simulation.

The history of the transition from the old-time college with its president qua faculty to the multiversity with its "administration" indistinguishable in any essential respects from that of industrial, commercial, civil, military, and hospital organizations,[20] is first of all the history of the presidency. In the first book published on the administration of higher education in America, Charles F. Thwing separates college presidents into three categories: ministers, scholars, and executives.[21] Of 288 pre-Civil War presidents, 262 were ordained ministers.[22] John Leverett, president of Harvard, 1708-1724, fit all three categories. He "studied divinity and preached . . . studied law and practiced,"[23] and having tutored Harvard students from 1686 to 1698 built a base of political power sufficient to withstand the Mathers, who were horrified over the elevation of a lawyer to be "a praesident (sic) for a College of Divines."[24]

John Wheelock, the first lay president in the full sense of the word, fit none of Thwing's categories. Appointed president by his father, Eleazar, who was founder and first president of Dartmouth College, he was a military man whose quarrels and political intrigue eventually led to the infamous Dartmouth College Case.[25]

The next lay presidents, William Samuel Johnson of Columbia and John McDowell of Pennsylvania, assumed the office in 1787 and 1803 respectively.[26] Josiah Quincy, a man of affairs, politician, judge, and mayor of Boston, 1823-1828, accepted the Presidency of Harvard in 1829 after his zeal for municipal reform had brought him defeat at the polls. "Born to rule,"[27] he stimulated an intellectual awakening, religious freedom for students, academic freedom for teachers,[28] the re-introduction of the elective system,[29] and sowed the seeds of graduate education.[30] He scandalized the Whig community by awarding

an honorary degree to that man of the people, U.S. President Andrew Jackson,[31] and stunned the champions of academic autonomy by inviting the grand jury to take action against disorderly students.[32] He was the first of a new breed, the dynamic "executive" president.[33]

The scholar (chemistry)[34] turned executive was personified in Harvard President Charles W. Eliot, 1869-1909. The innovations Quincy, an outsider, introduced had faded fast, but Eliot's imprint was indelible. "Two-thirds will and one-third intellect" he was an administrator first and last.[35] Seeking to accommodate the university to the significant changes taking place in the society within which, and for which the university exists,[36] Eliot insisted on being ex officio a member of every important board and committee as well as the presiding officer of each of the several faculties. A student of administration, he delegated many duties and responsibilities to subordinate administrators, thus freeing himself for broad concerns, one of which was the presentation of bold, new plans and programs. So well studied, digested, and propounded were his proposals that debate was minimized and the legislative function of the faculty, if it ever had had any stature at Harvard, fell into a decline.[37]

In 1888 President Francis L. Patton unabashedly declared in his inaugural address at Princeton: "College administration is a business in which trustees are partners, professors the salesmen and students the customers."[38] A year later the Montgomery, Alabama Advertiser editorialized on the qualifications to be sought in a new university president: "primarily a man of affairs and executive ability, while secondarily of broad culture and scholarly sympathy."[39]

President Arthur T. Hadley of Yale drew a dividing line between the old and the new when he reported that his predecessor, Timothy Dwight (the younger), "accepted the Yale presidency only on the stipulation that he have no teaching duties." Hadley further delineated the change by relating how when he visited old President Porter he like as not found him reading Kant, but when he called on President Dwight he was more likely to find him examining a balance sheet. On Porter's desk, too, he found manuscripts; on Dwight's the catalogues of competing institutions. It was in keeping with these differences, Hadley noted incidentally, that he called on Porter in his "study" but on Dwight in his "office."[40]

The shift in prevaling values was made clear when President Langdon Stewardson of Hobart was moved to demur "The President of Hobart, permit me to remind you, undertook his present duties with the express stipulation that he was not to be the financial drummer for the college, but its educational leader."[41]

Thorstein Veblen disdainfully labeled the new executive presidents "captains of erudition," while observing that America was reluctant to trust the management of its higher education to other than men of pecuniary substance.[42] Executive activities changed the university president into "the most universal faker and most variegated prevaricator that has yet appeared in the civilized world," said Upton Sinclair.[43] The new president moved in a new orbit. The extent of his removal from students and the campus is illustrated by a Chicago coed's quesitioning response to the news that President Hutchins, the most fantastic fund raiser of them all, had resigned: "How," she asked, "can a myth resign?"[44]

President Clark Kerr of the University of California cited Robert Hutchins as "the last of the giants in the sense that he was the

last of the university presidents who really tried to change his institutions and higher education in any fundamental way." Kerr then averred that the multiversity had become so complex internally, and in its relationship with the society in which it is embedded, that the president had been reduced to the meek role of "mediator-initiator."[45] If striving mightily is the criterion, Hutchins was not the last giant; if successful innovation is the criterion he may not have even made the grade.[46] In any case, mediating-initiating seems to be an inadequate response to the position. Whether leadership is still possible remains the crucial, debatable question.

Complimentary to the change in the presidents is the rise of the "full-time administration." In 1870 President Eliot started building his administrative team by appointing Professor Ephraim W. Gurney of the History Department to the position "Dean of the Faculty." That office established in America for the first time at Fordham University (1841) existed at a number of other colleges and could be traced back to the Praefectus Studiorum mentioned in the Jesuit Ratio Studiorum in 1599.[47] Later, over a period of years, LeBaron Russell Briggs informally assumed responsibility for what we now call "student affairs."[48] A similar position was first formally organized as the Office of the Dean of Men in 1901 at the University of Illinois.[49]

Separate full-time administrative offices which generally preceded the evolution of the office of the Dean of Men were Librarian (1875), Vice President (1886), Secretary of the Faculty (1887), Registrar (1896), Business Officer (1901), Dean (academic) (1904), and Dean of Women (1905). During the fifty-five year period, 1875-1930, the median number of administrative officers in thirty North Central liberal arts colleges had increased from three to fifteen and were listed, with other staff, under

347 different titles![50] By 1933 the median number of administrators in institutions of higher education in the United States was 30½[51] (though it should be noted that during "the Depression" administrative titles which carried no substantive authority or responsibility were sometimes passed out in lieu of salary increases).[52] In the Wisconsin State University System (sixth largest in the nation) there are currently 50,996 students, 3,300 teaching and research faculty, 499 administrators and 2,135 supporting staff members.[53]

The "great man" theory of history seems adequate to explain the genesis of administration in higher education. For example President Eliot and Dean LeBaron Russell Briggs, who went on to become president of Bowdoin, both qualify as great men. As indicated above, the first 250 years of the evolution of administration in higher education in America is the story of changes in the presidency. Since 1870 "the administration" has grown to include new offices. Operation of the "demonstration effect" undoubtedly was responsible for the spread of organizational concepts and techniques from campus to campus.

It is widely held that the growth of administration parallels the growth of higher education generally.[54] This matter invites further study. How do the growth rates compare? To which growth pattern is that of the rise of administration most analogous: student enrollment, faculty, growth, or the increasing demand of business and financial affairs?

In her study of The Evolution of Administrative Offices in (30) (Midwest) Liberal Arts Colleges. . .(see Table I for a list) Partridge studied the college catalogs, identified the administrative officers, taxonomized the office titles, and traced the evolution and growth of

the use of each from 1875 to 1933. Although she did not quantify the growth of supporting staff, (a deficiency from our viewpoint), her table of administrative officers[55] provides a definitive starting point for further investigation. By carefully combing through the annual and biennial reports of the U.S. Commissioner of Education we can build a body of data on student enrollments (Table II), faculty size (Table III), and annual income, which we can take as a further indication of the business-financial workload (Table IV).

Though Tables II, III, and IV speak for themselves, we are struck by the disparity and breadth of ranges in each category: students per administrator range from 6 (Kalamazoo, 1875) to 379 (Transylvania, 1890); and income per administrator ranges from $1,000 (Ripon, 1875) to $125,000 (Illinois, 1910). Not only is there wide latitude within the data for any given year, but neither size nor wealth at the beginning of the period (1875) is highly indicative of relative size or wealth in 1933. In face of this, it is reassuring to note the general analogy between medians and means. In other words, while there is diversity and change, the gestalt, as a whole, is relatively stable.

Turning to Figure 1, we note that the number of administrative officers is most generally analogous to the total size of faculty, and that both follow a growth curve which is not greatly different from that described by the number of students enrolled. However, the mean annual income per institution is highly erratic, even after conversion to constant (1933) dollars. If the administration takes the credit and blame for levels of institutional income, as it usually does, this record of fluctuation, together with the range of income per administrator cited

TABLE I

(from Partridge, page 2)

Institution	Location	Founded
Albion College	Albion, Michigan	1835
Augustana College	Rock Island, Illinois	1860
Baker University	Baldwin City, Kansas	1858
Beloit College	Beloit, Wisconsin	1846
Carleton College	Northfield, Minnesota	1866
Carthage College	Carthage, Illinois	1870
Centre College	Danville, Kentucky	1819
Cornell College	Mount Vernon, Iowa	1853
Denison University	Granville, Ohio	1831
Drury College	Springfield, Missouri	1873
Earlham College	Earlham, Indiana	1847
Franklin College	Franklin, Indiana	1834
Georgetown College	Georgetown, Kentucky	1829
Grinnell College	Grinnell, Iowa	1846
Heidelberg College	Tiffin, Ohio	1850
Hillsdale College	Hillsdale, Michigan	1844
Hiram College	Hiram, Ohio	1850
Illinois College	Jacksonville, Illinois	1829
Kalamazoo College	Kalamazoo, Michigan	1833
Knox College	Galesburg, Illinois	1836
Lawrence College	Appleton, Wisconsin	1847
Marietta College	Marietta, Ohio	1800
Monmouth College	Monmouth, Illinois	1856
Olivet College	Olivet, Michigan	1844
Ripon College	Ripon, Wisconsin	1850
Shurtleff College	Alton, Illinois	1827
Transylvania College	Lexington, Kentucky	1798
Wabash College	Crawfordsville, Indiana	1832
Washburn College	Topeka, Kansas	1865
College of Wooster	Wooster, Ohio	1866

TABLE II - STUDENTS AND ADMINISTRATORS

Institution	1875[56]			1880[57]			1885[58]			1890[59]			1895[60]		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Albion	-	-	-	-	-	-	71	5	14	529	6	88	589	6	98
Augustana	38	2	19	63	5	13	93	6	16	342	5	68	510	3	170
Beloit	-	-	-	-	-	-	65	5	13	344	6	57	443	6	74
Baker	-	-	-	-	-	-	-	-	-	451	7	64	580	11	53
Carleton	-	-	-	63	4	16	250	4	63	321	4	80	239	6	40
Carthage	86	1	86	83	1	83	47	2	24	177	4	44	129	6	22
Centre	100	4	25	96	4	24	-	-	-	240	4	60	265	4	66
Cornell	64	3	21	91	3	30	418	6	70	668	6	111	572	6	95
Denison	87	3	29	-	-	-	-	-	-	222	3	74	380	5	76
Drury	-	-	-	185	4	46	-	-	-	284	3	95	291	4	73
Earlham	55	2	28	41	2	20	-	-	-	210	8	26	256	7	37
Franklin	19	2	10	-	-	-	164	5	33	273	6	46	238	6	40
Georgetown	72	3	24	-	-	-	101	5	20	141	3	47	399	4	100
Grinnell	72	2	36	82	2	41	288	2	144	455	4	114	476	11	43
Heidelberg	-	-	-	-	-	-	-	-	-	368	6	61	272	9	30
Hillsdale	104	6	17	-	-	-	-	-	-	407	7	58	394	7	57
Hiram	-	-	-	-	-	-	-	-	-	325	4	81	354	4	89
Illinois	-	-	-	-	-	-	-	-	-	173	1	173	203	4	51
Kalamazoo	24	4	6	44	4	11	60	3	20	82	2	41	187	2	64
Knox	-	-	-	-	-	-	-	-	-	405	3	135	672	3	224
Lawrence	-	-	-	-	-	-	-	-	-	159	6	27	361	7	52
Marietta	82	3	27	-	-	-	-	-	-	178	2	89	248	5	50
Monmouth	-	-	-	-	-	-	200	7	29	211	6	35	289	6	48
Olivet	124	5	25	149	7	21	146	7	21	378	8	47	397	7	57
Ripon	56	8	7	62	6	10	25	5	5	179	5	36	264	5	53
Shurtleff	58	2	29	48	2	24	27	1	27	272	3	91	207	3	69
Transylvania	105	2	53	-	-	-	-	-	-	429	1	429	757	2	379
Wabash	86	5	17	96	5	19	-	-	-	209	8	26	240	5	48
Washburn	-	-	-	23	3	8	101	2	51	296	4	74	216	4	54
Wooster	171	3	57	181	4	45	214	6	36	735	6	123	778	7	111
Range	19-171	1-8	6-86	23-185	1-7	8-83	25-288	1-7	13-144	82-735	1-8	26-429	129-778	2-11	22-379
Median	82	3	27	96	4	24	146	5	29	296	5	59	354	6	59
Mean	78	3	26	87	4	22	142	4	36	315	5	63	374	6	62

1. Student Enrollment 2. Number of Administrative Officers (from Partridge Table XLIV).[55]
3. Ratio of Students to Administrative Officers X:1 -=Data Incomplete

TABLE II Page 2

Institution	1900[61] 1	2	3	1905[62] 1	2	3	1910[63] 1	2	3	1915[64] 1	2	3
Albion	-	-	-	483	7	69	500	6	83	535	7	76
Augustana	250	4	63	540	5	108	350	8	44	647	8	81
Beloit	420	8	60	609	9	68	409	16	26	388	18	22
Baker	629	7	90	983	5	197	675	14	48	471	10	47
Carleton	366	6	61	346	13	27	342	12	29	480	15	32
Carthage	120	6	20	252	10	25	124	8	16	197	12	16
Centre	-	-	-	-	-	-	-	-	-	-	-	-
Cornell	716	6	119	735	7	105	603	6	101	634	9	70
Denison	534	5	107	543	6	91	604	8	76	587	8	73
Drury	360	6	60	458	8	57	506	10	51	325	7	46
Earlham	298	12	25	445	12	37	391	14	28	397	17	23
Franklin	178	6	30	224	7	32	201	9	22	291	12	24
Georgetown	338	6	56	280	5	56	256	6	43	372	8	47
Grinnell	442	10	44	575	12	48	658	14	47	743	18	41
Heidelberg	374	8	47	184	8	23	179	10	18	509	11	46
Hillsdale	341	8	43	377	9	42	321	13	25	457	6	76
Hiram	424	4	106	272	3	91	345	8	43	231	10	23
Illinois	144	4	36	186	3	62	320	2	160	394	3	131
Kalamazoo	230	3	115	226	4	57	173	4	43	244	7	35
Knox	665	4	166	550	5	110	616	5	123	442	6	74
Lawrence	437	7	62	478	7	68	462	7	66	666	14	48
Marietta	300	5	60	370	6	62	392	6	65	255	6	43
Monmouth	303	3	101	469	3	156	293	6	49	480	9	53
Olivet	268	9	30	289	10	29	238	9	26	164	11	15
Ripon	175	5	35	146	7	21	219	10	22	306	10	31
Shurtleff	168	4	42	187	10	19	168	5	34	126	6	21
Transylvania	-	-	-	-	-	-	-	-	-	248	9	28
Wabash	200	5	40	281	7	40	348	7	50	335	5	67
Washburn	295	6	49	685	8	86	763	10	76	799	8	100
Wooster	762	9	85	606	7	87	597	10	60	734	11	67
Range	120-762	3-12	20-166	146-983	3-13	19-197	124-763	2-16	16-160	126-799	3-18	15-131
Median	338	6	56	377	7	54	348	8	44	397	9	44
Mean	361	6	60	421	7	60	395	9	44	430	10	43

1. Student Enrollment 2. Number of Administrative Officers (from Partridge Table XLIV).[55]
3. Ratio of Students to Administrative Officers X:1 -=Data Incomplete

TABLE II Page 3

Institution	1920[65] 1	2	3	1925[66] 1	2	3	1930[67] 1	2	3	1933[68] 1	2	3
Albion	530	7	76	718	8	90	797	12	66	640	10	64
Augustana	783	12	65	1000	16	63	612	19	32	550	14	39
Beloit	558	10	56	575	18	32	460	22	21	592	22	27
Baker	490	11	45	608	11	55	533	13	41	353	10	35
Carleton	634	27	23	813	23	35	810	23	35	813	20	41
Carthage	259	11	24	355	14	25	283	16	18	283	17	17
Centre	217	8	27	271	9	30	398	12	33	351	10	35
Cornell	887	20	44	699	20	35	574	20	29	533	20	27
Denison	-	-	-	1161	13	89	852	19	45	-	-	-
Drury	362	6	60	461	7	66	473	8	59	373	4	93
Earlham	555	15	37	550	19	29	390	22	18	-	-	-
Franklin	320	10	32	485	13	37	339	12	28	253	10	25
Georgetown	340	15	23	469	19	25	361	21	17	309	15	21
Grinnell	761	17	45	814	20	41	679	24	28	551	23	24
Heidelberg	353	11	32	504	18	28	401	14	29	353	12	29
Hillsdale	334	11	30	503	11	46	467	11	42	-	-	-
Hiram	285	10	29	377	11	34	348	12	29	385	20	19
Illinois	484	4	121	538	6	90	410	11	37	-	-	-
Kalamazoo	294	8	37	395	9	44	419	12	35	328	13	25
Knox	797	15	63	656	13	50	582	16	36	504	14	36
Lawrence	1012	14	84	1301	16	81	841	27	31	726	25	29
Marietta	267	7	38	351	9	39	371	15	25	427	15	28
Monmouth	442	9	49	479	21	23	480	24	20	485	21	23
Olivet	-	-	-	394	19	21	289	11	26	-	-	-
Ripon	410	16	26	478	15	32	436	15	29	329	15	22
Shurtleff	-	-	-	237	8	30	294	9	33	246	7	35
Transylvania	289	12	24	397	11	36	403	8	50	442	8	55
Wabash	343	7	49	517	7	74	407	11	37	370	10	37
Washburn	855	10	86	1228	12	103	1151	16	72	934	14	67
Wooster	684	12	57	968	21	46	868	25	34	875	26	34
Range	217-1012	4-27	23-121	237-1301	6-23	21-103	283-1151	8-27	17-72	246-934	4-26	17-93
Median	484	11	44	517	13	40	460	15	31	427	14	31
Mean	502	12	42	610	14	44	524	16	33	480	15	32

1. Student Enrollment 2. Number of Administrative Officers (from Partridge Table XLIV)[55]
3. Ratio of Students to Administrative Officers X:1 -=Data Incomplete

TABLE III - FACULTY AND ADMINISTRATORS

Institution	1875[56]			1880[57]			1885[58]			1890[59]			1895[60]		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Albion	-	-	-	-	-	-	16	5	3.20	25	6	4.17	32	6	5.33
Augustana	9	2	4.50	6	5	1.20	10	6	1.67	25	5	5.00	27	3	9.00
Beloit	-	-	-	-	-	-	14	5	2.80	18	6	3.00	23	6	3.83
Baker	-	-	-	-	-	-	-	-	-	13	7	1.86	22	11	2.00
Carleton	-	-	-	11	4	2.75	12	4	3.00	14	4	3.50	24	6	4.00
Carthage	7	1	7.00	6	1	6.00	6	2	3.00	12	4	3.00	13	6	2.17
Centre	7	4	1.75	6	4	1.50	-	-	-	11	4	2.75	15	4	3.75
Cornell	11	3	3.67	9	3	3.00	23	6	3.83	24	6	4.00	31	6	5.17
Denison	8	3	2.67	-	-	-	8	3	2.67	14	3	4.67	18	5	3.60
Drury	-	-	-	13	4	3.25	-	-	-	14	3	4.67	16	4	4.00
Earlham	6	2	3.00	6	2	3.00	-	-	-	14	8	1.75	18	7	2.57
Franklin	4	2	2.00	-	-	-	9	5	1.80	11	6	1.83	12	6	2.00
Georgetown	7	3	2.33	-	-	-	8	5	1.60	8	3	2.67	18	4	4.50
Grinnell	10	2	5.00	10	2	5.00	13	2	6.50	23	4	5.75	32	11	2.91
Heidelberg	-	-	-	-	-	-	-	-	-	16	6	2.67	19	9	2.11
Hillsdale	19	6	3.17	-	-	-	-	-	-	28	7	4.00	22	7	3.14
Hiram	-	-	-	-	-	-	-	-	-	16	4	4.00	14	4	3.50
Illinois	-	-	-	-	-	-	-	-	-	10	1	10.00	15	4	3.75
Kalamazoo	6	4	1.50	5	4	1.25	9	3	3.00	8	2	4.00	14	2	7.00
Knox	-	-	-	-	-	-	-	-	-	28	3	9.33	26	3	8.67
Lawrence	-	-	-	-	-	-	-	-	-	14	6	2.33	19	7	2.71
Marietta	9	3	3.00	-	-	-	-	-	-	11	2	5.50	42	5	8.40
Monmouth	-	-	-	-	-	-	15	7	2.14	14	6	2.33	15	6	2.50
Olivet	7	5	1.40	15	7	2.14	18	7	2.57	17	8	2.13	24	7	3.43
Ripon	12	8	1.50	13	6	2.17	13	5	2.60	12	5	2.40	18	5	3.60
Shurtleff	8	2	4.00	5	2	2.50	10	1	10.00	16	3	5.33	21	3	7.00
Transylvania	8	2	4.00	-	-	-	-	-	-	14	1	14.00	24	2	12.00
Wabash	11	5	2.20	11	5	2.20	-	-	-	13	8	1.63	20	5	4.00
Washburn	-	-	-	7	3	2.33	14	2	7.00	13	4	3.25	14	4	3.50
Wooster	13	3	4.33	14	4	3.50	25	6	4.17	54	6	9.00	64	7	9.14
Range	4-19	1-8	1.40-7.00	5-15	1-7	1.20-6.00	6-25	1-7	1.60-10.00	8-54	1-8	1.63-14.00	12-64	2-11	2.00-14.00
Median	8	3	2.67	9	4	2.25	13	5	2.60	14	5	2.80	20	6	3.33
Mean	9.0	3.30	2.73	9.13	3.73	2.45	13.12	4.35	3.02	17.00	4.70	3.62	22.40	5.50	4.07

1. Number of Faculty 2. Number of Administrative Officers (from Partridge Table XLIV)[55]
3. Ratio of Faculty to Administrative Officers X:1 - = Data Incomplete

TABLE III - Page 2

Institution	1900[61] 1	2	3	1905[62] 1	2	3	1910[63] 1	2	3	1915[64] 1	2	3
Albion	-	-	-	25	7	3.51	26	6	4.33	28	7	4.00
Augustana	31	4	7.75	40	5	8.00	29	8	3.63	41	8	5.13
Beloit	26	8	3.25	34	9	3.78	30	16	1.88	38	18	2.11
Baker	31	7	4.43	29	5	5.80	32	14	2.29	38	10	3.80
Carleton	24	6	4.00	22	13	1.69	25	12	2.08	36	15	2.40
Carthage	7	6	1.17	15	10	1.50	9	8	1.13	20	12	1.67
Centre	-	-	-	-	-	-	-	-	-	-	-	-
Cornell	34	6	5.67	41	7	5.86	41	6	6.83	38	9	4.22
Denison	37	5	7.40	35	6	5.83	35	8	4.38	42	8	6.00
Drury	21	6	3.50	22	8	2.75	28	10	2.80	19	7	2.71
Earlham	17	12	1.42	25	12	2.08	23	14	1.64	32	17	1.88
Franklin	11	6	1.83	11	7	1.57	13	9	1.44	17	12	1.42
Georgetown	18	6	3.00	19	5	3.80	18	6	3.00	25	8	3.13
Grinnell	35	10	3.50	32	12	2.67	49	14	3.50	57	18	3.17
Heidelberg	28	8	3.50	15	8	1.88	27	10	2.70	33	11	3.00
Hillsdale	18	8	2.25	20	9	2.22	22	13	1.69	24	6	4.00
Hiram	13	4	3.25	14	3	4.67	22	8	2.75	18	10	1.80
Illinois	18	4	4.50	11	3	3.67	22	2	11.00	20	3	6.67
Kalamazoo	14	3	4.67	12	4	3.00	12	4	3.00	15	7	2.14
Knox	26	4	6.50	30	5	6.00	30	5	6.00	26	6	4.33
Lawrence	23	7	3.29	32	7	4.57	30	7	4.29	49	14	3.50
Marietta	22	5	4.40	25	6	4.17	27	6	4.50	19	6	3.17
Monmouth	15	3	5.00	23	3	7.67	18	6	3.00	28	9	3.11
Olivet	23	9	2.56	21	10	2.10	27	9	3.00	19	11	1.73
Ripon	21	5	4.20	18	7	2.57	23	10	2.30	21	10	2.10
Shurtleff	19	4	4.75	14	10	1.40	13	5	2.60	13	6	2.17
Transylvania	-	-	-	-	-	-	-	-	-	25	9	2.78
Wabash	16	5	3.20	15	7	2.14	23	7	3.29	20	5	4.00
Washburn	22	6	3.67	99	8	12.38	106	10	10.60	45	8	5.63
Wooster	51	9	5.67	43	7	6.14	29	10	2.90	45	11	4.09
Range	7-51	3-12	1.17-7.40	11-99	3-13	1.40-12.38	9-106	2-16	1.13-11.00	13-57	3-18	1.42-6.67
Median	22	6	3.67	23	7	3.29	27	8	3.38	28	9	3.11
Mean	23	6.15	3.74	26.68	7.25	3.68	28.18	8.68	3.25	29.34	9.69	3.03

1. Number of Faculty 2. Number of Administrative Officers (from Partridge Table XLIV)[55]
3. Ratio of Faculty to Administrative Officers X:1 - = Data Incomplete

TABLE III - Page 3

Institution	1920[65] 1	2	3	1925[66] 1	2	3	1930[67] 1	2	3	1933[68] 1	2	3
Albion	31	7	4.43	41	8	5.13	48	12	4.00	40	10	4.10
Augustana	58	12	4.83	53	16	3.31	46	19	2.42	54	14	3.86
Beloit	44	10	4.40	48	18	2.67	49	22	2.23	54	22	2.45
Baker	31	11	2.82	35	11	3.18	32	13	2.46	32	10	3.20
Carleton	45	27	1.67	77	23	3.35	68	23	2.96	75	20	3.75
Carthage	25	11	2.27	37	14	2.64	25	16	1.56	26	17	1.53
Centre	15	8	1.88	19	9	2.11	27	12	2.25	31	10	3.10
Cornell	46	20	2.30	47	20	2.35	44	20	2.20	47	20	2.35
Denison	-	-	-	63	13	4.85	65	19	3.42	-	-	-
Drury	21	6	3.50	32	7	4.57	35	8	4.38	33	4	8.25
Earlham	28	15	1.87	38	19	2.00	40	22	1.82	-	-	-
Franklin	31	10	3.10	29	13	2.23	25	12	2.08	25	10	2.50
Georgetown	21	15	1.40	29	19	1.53	27	21	1.29	28	15	1.87
Grinnell	67	17	3.94	62	20	3.10	70	24	2.92	67	23	2.91
Heidelberg	25	11	2.27	37	18	2.06	41	14	2.93	39	12	3.25
Hillsdale	24	11	2.18	37	11	3.36	35	11	3.18	-	-	-
Hiram	21	10	2.10	27	11	2.45	25	12	2.08	33	20	1.65
Illinois	22	4	5.50	31	6	5.17	21	11	1.91	-	-	-
Kalamazoo	20	8	2.50	28	9	3.11	25	12	2.08	25	13	1.92
Knox	47	15	3.13	43	13	3.31	56	16	3.50	53	14	3.79
Lawrence	54	14	3.86	71	16	4.44	80	27	2.96	81	25	3.24
Marietta	16	7	2.29	23	9	2.56	35	15	2.33	31	15	2.07
Monmouth	25	9	2.78	38	21	1.81	44	24	1.83	48	21	2.29
Olivet	-	-	-	25	19	1.32	23	11	2.09	-	-	-
Ripon	29	16	1.81	36	15	2.40	33	15	2.20	33	15	2.20
Shurtleff	-	-	-	18	8	2.25	20	9	2.22	24	7	3.43
Transylvania	24	12	2.00	30	11	2.73	26	8	3.25	32	8	4.00
Wabash	23	7	3.29	26	7	3.71	32	11	2.91	34	10	3.40
Washburn	44	10	4.40	55	12	4.58	73	16	4.56	67	14	4.79
Wooster	44	12	3.67	64	21	3.05	73	25	2.92	105	26	4.04
Range	15-67	4-27	1.40-5.50	18-77	6-23	1.32-5.17	20-80	8-27	1.29-4.56	24-105	4-26	1.53-8.25
Median	28	11	2.55	38	14	2.71	40	16	2.50	34	14	2.43
Mean	32.63	11.67	2.80	39.97	13.90	2.88	41.43	16.00	2.59	44.68	15	2.98

1. Number of Faculty 2. Number of Administrative Officers (from Partridge Table XLIV)[55]
3. Ratio of Faculty to Administrative Officers X:1 - = Data Incomplete

TABLE IV - College Income and Administrators

Institutions	1875[56]			1880[57]			1885[58]			1890[59]			1895[60]		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Albion	-	-	-	-	-	-	24	5	5	-	-	-	20	6	3
Augustana	3	2	2	3	5	1	73	6	12	-	-	-	39	3	13
Beloit	-	-	-	-	-	-	28	5	6	-	-	-	41	6	7
Baker	-	-	-	-	-	-	-	-	-	-	-	-	23	11	2
Carleton	-	-	-	19	4	5	60	4	15	-	-	-	30	6	5
Carthage	9	1	9	10	1	10	6	2	3	-	-	-	9	6	2
Centre	28	4	7	14	4	4	-	-	-	-	-	-	27	4	7
Cornell	18	3	6	16	3	5	-	-	-	-	-	-	35	6	6
Denison	28	3	9	-	-	-	24	3	8	-	-	-	42	5	8
Drury	-	-	-	8	4	2	-	-	-	-	-	-	24	4	6
Earlham	19	2	10	12	2	6	-	-	-	-	-	-	45	7	6
Franklin	7	2	4	-	-	-	16	5	3	-	-	-	22	6	4
Georgetown	-	-	-	-	-	-	-	-	-	-	-	-	30	4	8
Grinnell	11	2	6	-	-	-	-	-	-	-	-	-	57	11	5
Heidelberg	-	-	-	-	-	-	-	-	-	-	-	-	12	9	1
Hillsdale	12	6	2	-	-	-	-	-	-	-	-	-	23	7	3
Hiram	-	-	-	-	-	-	-	-	-	-	-	-	23	4	6
Illinois	-	-	-	-	-	-	-	-	-	-	-	-	22	4	6
Kalamazoo	12	4	3	7	4	2	8	3	3	-	-	-	22	2	11
Knox	-	-	-	-	-	-	-	-	-	-	-	-	32	3	11
Lawrence	-	-	-	-	-	-	-	-	-	-	-	-	18	7	3
Marietta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monmouth	-	-	-	-	-	-	-	-	-	-	-	-	23	6	4
Olivet	14	5	3	15	7	2	26	7	4	-	-	-	28	7	4
Ripon	11	8	1	21	6	4	60	5	12	-	-	-	32	5	6
Shurtleff	18	2	9	11	2	6	10	1	10	-	-	-	17	3	6
Transylvania	16	2	8	-	-	-	-	-	-	-	-	-	24	2	12
Wabash	20	5	4	28	5	6	-	-	-	-	-	-	34	5	7
Washburn	-	-	-	10	3	3	55	2	28	-	-	-	18	4	5
Wooster	22	3	7	15	4	4	34	6	6	-	-	-	35	7	5
Range	3-28	1-8	1-10	3-28	1-7	1-10	8-73	1-7	3-28	-	-	-	9-57	2-11	1-13
Median	16	3	5	14	4	4	28	5	6	-	-	-	27	6	5
Mean	16	3	5	14	4	4	33	4	8	-	-	-	28	6	5

1. Income in thousands of dollars, expressed in constant (1933) dollars.[69] Data for 1920 and thereafter exclude contributions to endowment and other permanent funds. Data for 1930 and 1933 includes income for education and general only; excludes auxiliary enterprises, building funds, etc.
2. Number of Administrative Officers (from Partridge Table XLIV).[55]
3. Ratio of thousands of dollars of Income to Administrative Officers X:1 - = Data Incomplete

TABLE IV - Page 2

Institution	1900[61] 1	2	3	1905[62] 1	2	3	1910[63] 1	2	3	1915[64] 1	2	3
Albion	-	-	-	55	7	8	65	6	11	128	7	18
Augustana	43	4	11	85	5	17	165	8	21	144	8	18
Beloit	36	8	5	94	9	10	146	16	9	266	18	15
Baker	41	7	6	57	5	11	71	14	5	-	-	-
Carleton	37	6	6	47	13	4	84	12	7	580	15	39
Carthage	11	6	2	13	10	1	30	8	4	51	12	4
Centre	-	-	-	-	-	-	-	-	-	-	-	-
Cornell	50	6	8	77	7	11	102	6	17	169	9	19
Denison	74	5	15	81	6	14	147	8	19	-	-	-
Drury	31	6	5	29	8	4	70	10	7	69	7	10
Earlham	32	12	3	91	12	8	114	14	8	226	17	13
Franklin	20	6	3	22	7	3	36	9	4	68	12	7
Georgetown	32	6	5	37	5	7	51	6	9	54	8	7
Grinnell	63	10	6	86	12	7	320	14	23	392	18	22
Heidelberg	12	8	2	28	8	4	57	10	6	57	11	5
Hillsdale	17	8	2	23	9	3	104	13	8	102	6	17
Hiram	24	4	6	35	3	12	56	8	7	62	10	6
Illinois	22	4	5	22	3	7	250	2	125	82	3	27
Kalamazoo	29	3	10	35	4	8	52	4	13	200	7	29
Knox	39	4	10	61	5	12	177	5	35	300	6	50
Lawrence	43	7	6	38	7	5	186	7	27	360	14	26
Marietta	24	5	5	34	6	6	238	6	40	63	6	11
Monmouth	27	3	9	48	3	16	67	6	11	81	9	9
Olivet	28	9	3	32	10	3	72	9	8	57	11	5
Ripon	24	5	5	41	7	6	73	10	7	78	10	8
Shurtleff	18	4	5	31	4	8	23	10	2	34	5	7
Transylvania	-	-	-	-	-	-	-	-	-	62	9	7
Wabash	47	5	9	51	7	7	97	7	14	81	5	16
Washburn	19	6	3	59	8	7	137	10	14	98	8	12
Wooster	48	9	5	58	7	8	635	10	64	224	11	20
Range	11-74	3-12	2-15	13-94	3-13	1-17	23-635	2-16	2-125	34-392	3-18	4-50
Median	36	6	6	48	7	7	102	9	11	82	9	9
Mean	33	6	6	49	7	7	129	9	14	151	10	15

1. Income in thousands of dollars, expressed in constant (1933) dollars.[69] Data for 1920 and thereafter exclude contributions to endowment and other permanent funds. Data for 1930 and 1933 includes income for education and general only; excludes auxiliary enterprises, building funds, etc.
2. Number of Administrative Officers (from Partridge Table XLIV).[55]
3. Ratio of thousands of dollars of Income to Administrative Officers X:1 - = Data Incomplete

TABLE IV - Page 3

Institution	1920[65] 1	2	3	1925[66] 1	2	3	1930[67] 1	2	3	1933[68] 1	2	3
Albion	59	7	8	148	8	19	278	12	23	227	10	23
Augustana	87	12	7	160	16	10	157	19	8	137	14	10
Beloit	22	10	2	299	18	17	284	22	13	227	22	10
Baker	66	11	6	114	11	10	143	13	11	93	10	9
Carleton	417	27	15	451	23	20	537	23	23	405	20	20
Carthage	69	11	6	69	14	5	108	16	7	100	17	6
Centre	48	8	6	71	9	8	113	12	9	105	10	11
Cornell	144	20	7	215	20	11	237	20	12	157	20	8
Denison	-	-	-	265	13	20	420	19	22	-	-	-
Drury	49	6	8	79	7	11	137	8	17	91	4	23
Earlham	111	15	7	325	19	17	211	22	10	-	-	-
Franklin	72	10	7	111	13	9	125	12	10	95	10	10
Georgetown	59	15	4	153	19	8	175	21	8	106	15	7
Grinnell	277	17	16	359	20	18	436	24	18	221	23	10
Heidelberg	37	11	3	205	15	14	178	14	13	106	12	9
Hillsdale	30	11	3	155	11	14	144	11	13	-	-	-
Hiram	45	10	5	96	11	9	166	12	14	124	20	6
Illinois	41	4	10	111	6	19	261	11	24	-	-	-
Kalamazoo	66	8	8	180	9	20	349	12	29	105	13	8
Knox	135	15	9	231	13	18	267	16	17	187	14	13
Lawrence	174	14	12	340	16	21	510	27	19	278	25	11
Marietta	45	7	6	125	9	14	128	15	9	91	15	6
Monmouth	75	9	8	116	21	6	171	24	7	160	21	8
Olivet	-	-	-	85	19	4	135	11	12	-	-	-
Ripon	90	16	6	123	15	8	91	15	6	89	15	6
Shurtleff	-	-	-	94	8	12	178	9	20	53	7	8
Transylvania	-	-	-	112	11	10	95	8	12	79	8	10
Wabash	47	7	7	111	7	16	173	11	16	149	10	15
Washburn	99	10	9	169	12	14	211	16	13	209	14	15
Wooster	135	12	11	377	21	18	684	25	27	298	26	11
Range	22-417	4-27	3-16	69-451	6-23	4-21	91-684	8-27	6-29	53-405	4-26	6-23
Median	69	11	6	153	12	13	173	16	11	124	15	8
Mean	96	12	8	182	14	13	237	16	15	156	15	10

1. Income in thousands of dollars, expressed in constant (1933) dollars.[69] Data for 1920 and thereafter exclude contributions to endowment and other permanent funds. Data for 1930 and 1933 includes income for education and general only; excludes auxiliary enterprises, building funds, etc.
2. Number of Administrative Officers (from Partridge Table LXIV) [55]
3. Ratio of thousands of dollars of Income to Administrative Officers X:1 - = Data Incomplete

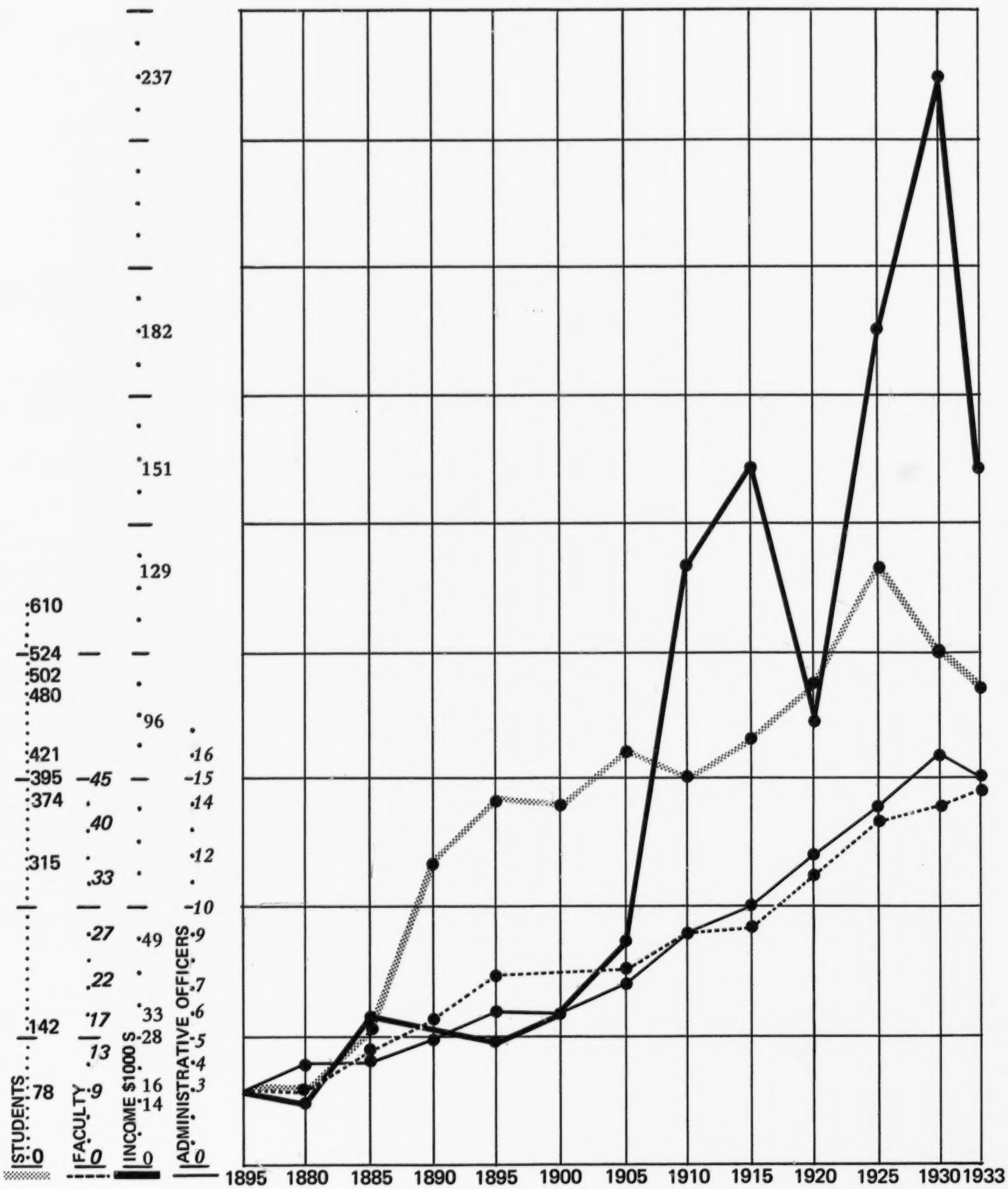

Figure 1 — Mean number of students, faculty, administrative officers, and thousands of dollars of income for each period, listed in thirty liberal arts colleges from 1875 to 1933.

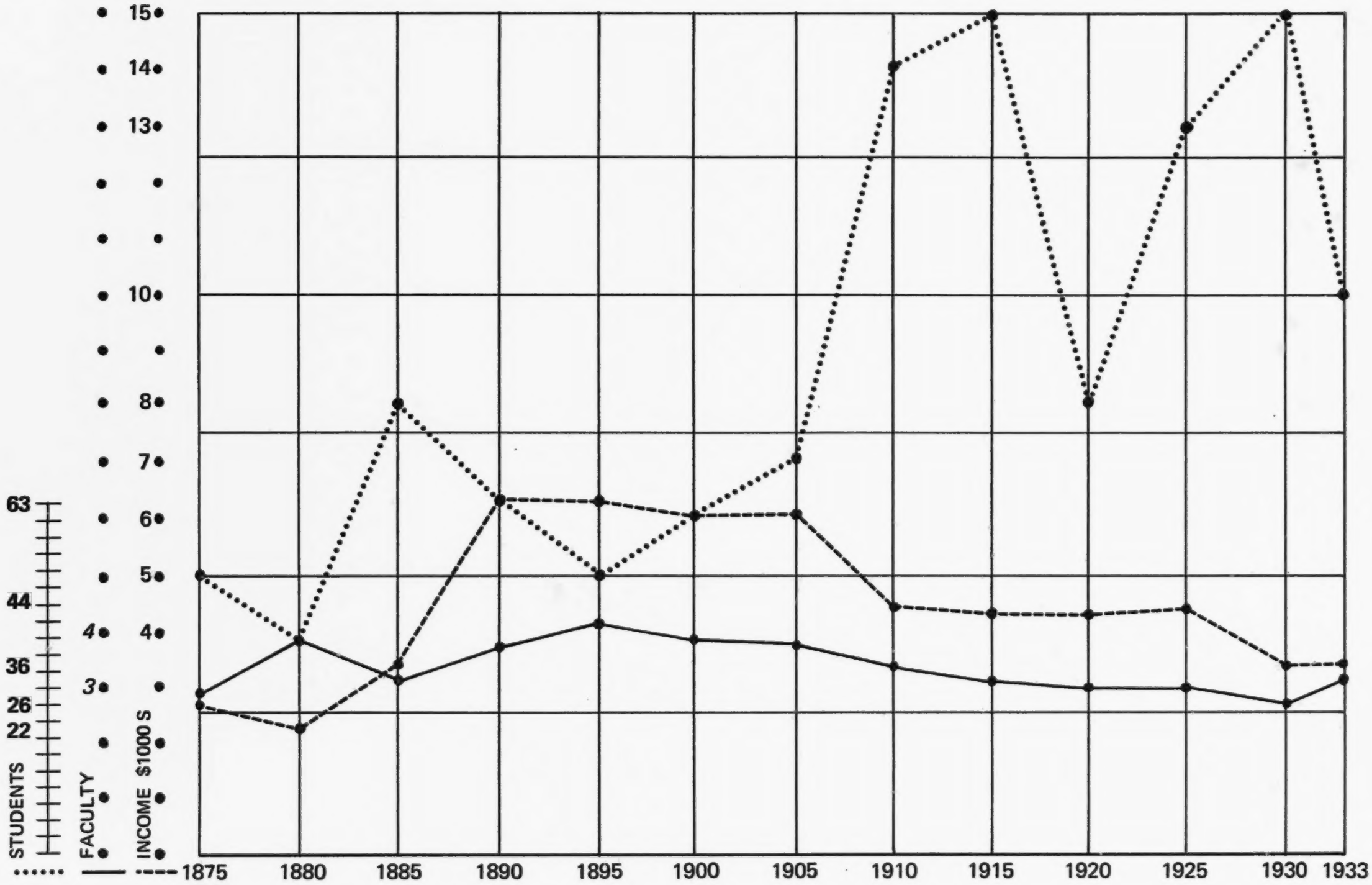

Figure 2 — Mean ratio of students, faculty, and thousands of dollars of income for each period to number of administrative officers in thirty liberal arts colleges from 1875 to 1933.

above and illustrated again in Figure 2, should be disturbing. Further, in Figure 2, we see that administration has not been growing faster than the number of students or the total number of faculty, while it has been growing much more slowly than (constant) dollar income.

Private liberal arts colleges predominated prior to 1950.[70] To confirm our conclusion that administration has not grown disproportionately, we should like to have evidence from recent, public higher institutions. We should also like to have a broader definition of administration. Without pretending that they are typical nor that this data represents the fruits of a comprehensive search, we can note the following evidence from the Wisconsin State Universities for the years since the Educational Finance Inquiry Commission's standard definition of "administration" was adopted:[71]

Year	Academic Operational Expenditures	Total Expenditures for Administration	Ratio
1959-60	$10,715,830.36	$ 525,075.69	4.90%
1960-61	12,026,709.73	614,564.87	5.11
1961-62	13,997,929.36	966,989.77	6.91
1962-63	22,790,822.98	1,102,547.63	4.84
1963-64	29,003,536.61	1,450,327.78	5.00
1964-65	37,792,671.01	1,742,804.55	4.61
1965-66	51,478,518.31	2,557,701.55	4.97
1966-67	72,354,196.16	3,633,764.33	5.02

Data for all of the institutions in the United States is available but only through 1963-64:

Percentage of Total Operating Expenditures Devoted to Administration

	All	Public	Private
1951-52[72]	9.50%	7.60%	11.60%
1953-54[73]	10.01	7.78	12.74
1955-56[74]	10.20	7.80	13.20
1957-58[75]	10.50	8.50	13.10
1959-60[76]	10.40	8.60	12.80
1961-62[77]	10.50	8.40	13.20
1963-64[78]	10.50	9.10	12.20

Again, the stability of administration as a share of total operations, seems evident.

The rise in administration during the first 250 years of higher education in America is the story of gradual change in the character and attitude of the college president. During the past 100 years, it is the story of a gradual growth, punctuated now and then by individual leadership. Only one facet, the emergence of student personnel services, seems worthy of detailed study.[79] All in all, "managerial evolution" seems more descriptive than "managerial revolution" whether one is speaking of growth or of organization and technique unless, of course, one is addressing a group which is so out of touch with the larger contemporary secular society as not to be knowledgeable concerning changes in management generally.[80]

There is a pervasive, though undocumented, impression in academic circles that student-faculty ratios affect prestige levels i.e. institutions with high ratios, say 8:1 rate higher in the pecking order than those with low ratios, say 22:1. (Indeed, prestige correlates,

positively and significantly, with student-faculty ratios only when both private and public categories are both mixed in the study; i.e. private institutions, with high student faculty ratios (8:1) have high prestige, while public institutions, with low student-faculty ratios (22:1) have low prestige. Consider the two categories separately, and the correlation co-efficient drifts to levels of insignificance.[81]

Cartter does not cite student-faculty ratios as being significant factors in the patterns of quality in universities, but does comment on administrative leadership.[82] Of course no one is claiming that administrative leadership correlates with the size of the university administration.

No standards exist for determining the number of administrative officers necessary for the most efficient operation of a university.[83] In searching for policy guides we could examine the practice in other states and adjust our practice toward the typical. The result could be well-deserved movement toward mediocrity.

Our foremost concern should be the effect of various teaching faculty-administrative faculty ratios on the quality of instruction as measured by test scores, persistence to graduation, enrollment in graduate schools, success after graduation, etc. If student-faculty ratios are accepted as a given, an increase in the administrative faculty will, ceteris paribus, mean a decrease in the teaching faculty. A decrease in the teaching faculty, with a constant size student body, will mean larger classes. There are those who hold that the smaller the class the more effective the educational process, however it is not clear that smaller classes yield better results. It is certainly doubtful that the educational product is much better if forty students attend a lecture rather than two hundred and fifty.

It is of some interest that study after study of controlled experiments did not reveal that the small class had any advantage over the large class.[84]

One study which dealt with 59 experiments in 108 classes distributed among 11 departments in four colleges, and involving 6,059 students concluded: "Class size seemed to be a relatively minor factor. . .in student achievement. Techniques of instruction may have less influence upon student achievement than is generally ascribed to them and. . .the value of student participation may be over-rated. In forty-six of the experiments (78%) a more or less decided advantage accrued to the paired students in the large section, and only in the remaining 13 (22%) was there any advantage in favor of the small sections."[85]

We have noted that (1) university administration has grown at about the same rate as the total faculty and the student body, (2) Wisconsin State University teaching faculty-administrative faculty ratios average 6:1 vs. a persistent 3:1 elsewhere, and that Wisconsin State University budgets for administration average about 5% of total operations vs. 9% in public institutions of higher education nationally and 12% in private colleges and universities. It is common knowledge that (1) a large segment of the faculty would react negatively to increases in the size of the ADMINISTRATIVE faculty and (2) a decrease in the relative size of the teaching faculty would not have adverse effects on educational outcomes. There is a strong possibility that major advantages will accrue to institutions that shift effort into such administrative functions as program planning, systems analysis, computing, public relations, information and intelligence service, institutional studies, development, etc. Ability to gain these

advantages while minimizing losses due to faculty disaffection might well be a critical test of executive leadership.

1. George P. Schmidt, The Old Time College President (New York: Columbia University Press, 1930), page 228.

2. John S. Brubacher and Willis Rudy, Higher Education in Transition (New York: Harper & Row, 1958), page 353.

   Charles F. Thwing, A History of Higher Education in America (New York: D. Appleton-Century, 1906), pages 24 and 78.

3. Schmidt, page 11.

4. Frederick Rudolph, The American College and University, A History (New York: Random House, Vintage, 1962), pages 168 & 169.

5. For an interesting account of the election of rectors see G.G. Bush, "The Origin of the First German Universities," Education (July, 1884), pages 576 and 577.

6. Richard Hofstadter, Academic Freedom in the Age of the College (New York: Columbia University Press, 1955), pages 124-126.

7. Frederick Rudolph, Mark Hopkins and the Log: Williams College 1835-1872 (New Haven: Yale University Press, 1956), pages 225-227.

8. Clark Kerr, The Uses of the University (New York: Harper & Row, Torchbooks, 1963), pages 65-67.

9. David Riesman, "The Academic Procession," Education, Economy, and Society, ed. A.H. Halsey, Jean Flond, and C. Arnold Anderson (New York: Free Press, 1966), pages 25 and 54.

   Kerr, pages 44 and 103.

10. John S. Diekhoff, The Domain of the Faculty (New York: Harper and Brothers, 1956), page 82.

11. Joseph Katz, The Student Activists (Stanford: Institute for the Study of Human Problems, 1967), page 19.

12. Elizabeth Sewell, "Flexibility in American Universities," Universities Quarterly, Vol. XIII (May, 1959), page 280.

13. Rudolph, American College. . ., page 417.

14. Riesman, pages 483-487.

15. Katz, page 19.

16. Kerr, page 91.

17. Robert M. Hutchins, The Higher Learning in America (New Haven: Yale University Press, Paperbound, 1936), page 6.

18. Jan Christian Smuts, Holism and Evolution (New York: Viking, Compass, 1926), xviit 362 pages.

    William H. Cowley, "Intelligence is Not Enough," Journal of Higher Education, Vol. IX (December, 1938), pages 469-477.

    Bonadventure Schwinn, "Hutchins, Cowley, and Pope Pius IX," (Catholic World, Vol. CLIV (October, 1941), pages 22-29.

19. Francis E. Rourke and Glenn E. Brooks, The Managerial Revolution in Higher Education (Baltimore: Johns Hopkins Press, 1966), page 2.

20. Edward H. Litchfield, "Notes on a General Theory of Administration," Administrative Science Quarterly, Vol. 1 (June, 1956), page 28.

21. Charles F. Thwing, College Administration (New York: Century, 1900), page 49.

22. Schmidt, page 184.

23. Thwing, A History. . ., page 150.

24. Hofstadter, pages 101 and 104-106.

25. Brubacher & Rudy, page 34.

    Trustees of Dartmouth College v. William H. Woodward, 4 Wheat. 518, 4 L.Ed. 629 (1819).

26. Schmidt, page 185.

27. Thwing, A History. . ., pages 166 and 167.

28. Samuel Eliot Morrison, Three Centuries of Harvard 1636-1936 (Cambridge: Harvard University Press, 1936), pages 187-191, 220-221, and 254-259.

29. Brubacher and Rudy, page 201.

    Morrison, page 233.

30. Rudolph, American College . . ., page 121.

31. Rudolph, American College . . ., page 201.

32. Morrison, pages 252 and 253.

33. Thwing, A History . . ., pages 166 and 167.

34. Thomas E. Blackwell, College and University Administration (New York: Center for Applied Research in Education, 1966), page 15.

35. Thwing, A History . . ., pages 434 and 435.

    Harold W. Dodds, The Academic President -- Educator or Caretaker (New York: McGraw-Hill, 1962), pages 37 and 38.

36. Rudolph, American College . . ., page 493.

37. Brubacher and Rudy, pages 351-354.

    Charles W. Eliot, University Administration (Boston: Houghton, Mifflin, 1908), pages 228-229 and 235.

38. Thomas Jefferson Wertenbaker cited in Rudolph, American College . . ., pages 160 and 161.

39. George Frederick Mellon, Popular Errors Concerning Higher Education in the United States and the Remedy (Leipsic, Germany: Gressner & Schramm, 1890), pages 9 and 10.

40. Morris Hadley cited in Brubacher and Rudy, page 351.

41. Rudolph, American College . . ., page 421.

42. Thorstein Veblen, The Higher Learning in America (New York: Huebsch, 1918), pages 67 and 68.

43. Upton Sinclair, The Goose - Step: A Study of American Education (Pasadena: Reagan, 1923), pages 382-384.

44. James Richard Connor, The Social and Educational Philosophy of Robert Maynard Hutchins (an unpublished Master's dissertation, University of Wisconsin, 1954), pages 26-27 and 111.

45. Kerr, pages 29-45.

46. Dodds, pages 44 and 45.

47. Merle Scott Ward, Philosophies of Administration Current in the Deanship of the Liberal Arts College (New York: Columbia University, 1934), pages 16 and 17.

48. Brubacher and Rudy, pages 322.

49. Arthur J. Klein, Survey of Land-Grant Colleges and Universities (Washington: Government Printing Office, 1930), page 417.

50. Years in parentheses are the median dates of establishment of these officers in the 30 North Central liberal arts colleges studied by Florence Alden Partridge, The Evolution of Administrative Offices in Liberal Arts Colleges from 1875 to 1933 (an unpublished Master's dissertation, University of Chicago, 1934), pages 73, 77, and 87-94.

51. Earl J. McGrath, The Evolution of Administrative Offices in Institutions of Higher Education in the United States from 1860 to 1933 (an unpublished doctoral dissertation, University of Chicago, 1938), pages 190-193.

52. Eugene R. McPhee, Secretary of the Board of Regents and Director of the Wisconsin State Universities, personal interview in Madison, Wisconsin on April 22, 1968.

53. Robert Alesch, Personnel Officer, Board of Regents of Wisconsin State Universities, personal interview in Madison, Wisconsin, April 29, 1968. In this enumeration "administrators" include librarians, counselors and other student affairs personnel; "staff" is limited to classified personnel in Range 11 (Schedule 1) and below.

54. Brubacher and Rudy, pages 391, 350 & 351, & 353-355.

    Kerr, page 28.

    McGrath, pages 186 and 201.

    Perkins, pages 23-28 and 64.

    Rudolph, American College . . ., pages 417, 434, and 435.

55. Partridge, "Table XLIV," page 74.

56. Report of the Commissioner of Education for the Year 1875 (Washington: U.S. Bureau of Education, 1876), pages 717-748.

57. Report of the Commissioner of Education for the Year 1880 (Washington: U.S. Bureau of Education, 1882), pages 640-675.

58. Report of the Commissioner of Education for the Year 1885-86 (Washington: U.S. Bureau of Education, 1887), pages 494-519.

59. Report of the Commissioner of Education for the Year 1890-91, Vol. 2 (Washington: U.S. Bureau of Education, 1894), pages 1398-1413.

60. Report of the Commissioner of Education for the Year 1895-96, Vol. 2 (Washington: U.S. Bureau of Education, 1897), pages 1960-1993.

61. Report of the Commissioner of Education for the Year 1900-1901, Vol. 2 (Washington: U.S. Bureau of Education, 1902), pages 1652-1671 & 1688-1707.

62. Report of the Commissioner of Education for the Year Ending June 30, 1906, Vol. 1, (Washington: U.S. Bureau of Education, 1908), pages 490-509 and 530-551.

63. Report of the Commissioner of Education for the Year Ending June 30, 1911, Vol. 2 (Washington: U.S. Bureau of Education, 1912), pages 910-935 and 954-971.

64. Report of the Commissioner of Education for the Year Ending June 30, 1917, Vol. 1 (Washington: U.S. Bureau of Education, 1917), pages 306-325 and 342-357.

65. Biennial Survey of Education, 1918-1920, Bulletin, 1923, No. 29 (Washington: U.S. Bureau of Education, 1923), pages 309-383 and 404-425.

66. Biennial Survey of Education, 1924-1926, Bulletin, 1928, No. 25 (Washington: U.S. Bureau of Education, 1928), pages 869-930 & 946-968.

67. Biennial Survey of Education, 1928-1930, Bulletin, 1931, No. 20 (Washington: U.S. Office of Education, 1932), pages 424-478 & 502-524.

68. Biennial Survey of Education, 1932-1934, Bulletin, 1935, No. 2 (Washington: U.S. Office of Education, 1937), Chapter IV, pages 130-159 & 226-251.

69. Changes in the Cost of Living, Serial No. R. 200 (Washington: U.S. Bureau of Labor Statistics, 1935), page 5.

70. Digest of Educational Statistics, 1967 (Washington: U.S. Office of Education, 1967), page 68.

71. Thomas E. Blackwell and others, College and University Business Administration (Washington: American Council on Education, 1952), Vol. pages V, 70 and 71.

72. Statistics of Higher Education: Receipts, Expenditures, and Property 1951-52 (Washington: U.S. Office of Education, 1955), page 35.

73. Statistics of Higher Education: Receipts, Expenditures, and Property 1953-54 (Washington: U.S. Office of Education, 1957), page 56.

74. Statistics of Higher Education, 1955-56, Receipts, Expenditures, and Property (Washington: U.S. Office of Education, 1959), pages 66, 68 & 71.

75. Statistics of Higher Education, 1957-58, Receipts, Expenditures and Property (Washington: U.S. Office of Education, 1961), page 44.

76. Financial Statistics of Institutions of Higher Education, 1959-60 (Washington: U.S. Office of Education, 1964), page 53.

77. Digest of Educational Statistics (Washington: U.S. Office of Education, 1963), page 75.

78. Digests of Educational Statistics (Washington: U.S. Office of Education, 1965), page 103.

79. Brubacher and Rudy, pages 318-323.

80. James Burnham, The Managerial Revolution (Bloomington: Indiana University Press, Midland, 1941), pages 71-82.

Rourke and Brooks, pages 1-17.

81. Alexander Astin, Who Goes Where to College (Chicago: SRA, 1965), 125 pages; and Allen M. Cartter, American Universities and Colleges (Washington: American Council on Education, 1964), 1339 pages.

82. Allen M. Cartter, An Assessment of Quality in Graduate Education (Washington: American Council on Education, 1966), 131 pages, n.b. pages 106-117.

83. John Dale Russell, "Colleges and Universities - Administration," Encyclopedia of Educational Research, ed. Walter S. Monroe (New York: Macmillan, 1941), page 217.

84. Ruth E. Eckert, "Colleges and Universities - Programs," Encyclopedia of Educational Research, ed. Chester W. Harris (New York: Macmillan, 1960), page 279.

85. Summary Abstracts in the Studies of Class Size (University Park: Pennsylvania State University, 1958), pages 1, 4, 7, 8, and 20.